

Draft Suggested Language For Manual or Insert 2.1

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Changes since Version 2.0: Last paragraph edited to reflect the fact that hearing aid companies may not use the ANSI C.63.19 measurement method, so statements in the previous draft about higher ratings may not apply.

Hearing Aid Compatibility with Mobile Phones

When some mobile phones are used near some hearing devices (hearing aids and cochlear implants), users may detect a buzzing, humming, or whining noise. Some hearing devices are more immune than others to this interference noise, and phones also vary in the amount of interference they generate.

The wireless telephone industry has developed ratings for some of their mobile phones, to assist hearing device users in finding phones that may be compatible with their hearing devices. Not all phones have been rated. Phones that are rated have the rating on their box or a label on the box.

The ratings are not guarantees. Results will vary depending on the user's hearing device and hearing loss. If your hearing device happens to be vulnerable to interference, you may not be able to use a rated phone successfully. Trying out the phone with your hearing device is the best way to evaluate it for your personal needs.

M-Ratings: Phones rated M3 or M4 meet FCC requirements and are likely to generate less interference to hearing devices than phones that are not labeled. M4 is the better/higher of the two ratings.

T-Ratings: Phones rated T3 or T4 meet FCC requirements and are likely to be more usable with a hearing device's telecoil ("T Switch" or "Telephone Switch") than unrated phones. T4 is the better/higher of the two ratings. (Note that not all hearing devices have telecoils in them.)

Hearing devices may also be measured for immunity to this type of interference. Your hearing device manufacturer or hearing health professional may help you find results for your hearing device. The more immune your hearing aid is, the less likely you are to experience interference noise from mobile phones.

Common Symbols for Hearing Aid and Cellular Compatibility Labeling

A Rated for Hearing
Aids: M4, T3

B



C M4, T3

For Inductive Coupling to a Hearing Aid's Telecoil

The FCC rules require each digital wireless phone manufacturer to provide carriers with 2 commercially available handsets, and each nationwide carrier to offer its customers a minimum of 2 handsets that provide telecoil-coupling capability for each transmission technology by September 2006. Digital wireless handsets that are being tested for magnetic field strength will be assessed a rating as defined in ANSI C63.19.

Cell phone manufacturers are required to produce cell phones that test to a rating of T3 or T4 per ANSI C63.19. The higher the "T" rating, the less likely the hearing aid user will experience interference when the hearing aid is set in the telecoil mode while using a cell phone.

Hearing Aid Requirements

The FCC does not have regulatory authority over hearing aids. This authority, although somewhat limited, lies with the Food and Drug Administration (FDA). Even so, the FCC ruling encouraged the hearing aid industry to test and label their products according to the level of immunity they have to digital cell phone emissions. Hearing aid manufacturers should be consulted for the most up-to-date rating and information on their products.

Where Can I Find More Information?

ATIS (Alliance for Telecommunications Industry Solutions)

www.atis.org/atis/hac/hachome.htm

CTIA—The Wireless Association™

www.accesswireless.org

FCC (Federal Communications Commission)

<http://ftp.fcc.gov/cgb/dro/hearing.html>

RERC on Telecommunications Access

tap.gallaudet.edu/wirelesstelecom.htm

Self Help for Hard of Hearing People (SHHH)

www.hearingloss.org/hat/TipsWirelessPhones.htm

Developed by:

CTIA—The Wireless Association™ with The RERC on Telecommunications Access, The Alliance for Telecommunications Industry Solutions Hearing Aid Compatibility Technical Solutions Incubator, and Self Help for Hard of Hearing People, Inc.

Hearing Aid Compatibility With Digital Wireless Cell Phones:



*An Update for
Audiologists and Hearing
Health Professionals*

The FCC Ruling

In 2003, the FCC partially lifted the exemption to hearing aid compatibility (HAC) requirements for digital wireless cell phones and developed a phase-in period for compliance by the wireless industry. The ruling requires products to be labeled for cell phones receiving certain HAC ratings based on the ANSI C63.19 Test and Measurement Standard. Labels will appear on the outside packaging of cell phones. This ruling does not include a volume control requirement.

For Acoustic Coupling to a Hearing Aid's Microphone

The FCC rules require each digital wireless phone manufacturer to provide carriers with 2 commercially available handsets, and each nationwide carrier to offer its customers a minimum of 2 handsets with reduced RF emissions for each transmission technology by September 2005. Digital wireless handsets that are being tested for reduced RF emissions will be assessed a rating as defined in ANSI C63.19.

Cell phone manufacturers are required to produce cell phones that test to a rating of M3 or M4 per ANSI C63.19. The higher the "M" rating, the less likely the hearing aid user will experience interference when the hearing aid is set in the microphone mode while using a cell phone.

PHOTO: Oticon



Important Points my Clients Need to Know

- **Look for cell phones rated M3 or M4** (as of Sept. 2005) if a hearing aid wearer uses acoustic coupling to a telephone.
- **Look for cell phones rated T3 or T4** (as of Sept. 2006) if a hearing aid wearer uses inductive coupling to a telephone.
- **These ratings (i.e., M or T)** should be used as a guide to narrow the search for a digital wireless handset to try out before making a purchase.
- **Even though volume control** is not part of the FCC ruling, most cell phones do have a volume control.
- **The ability to control the backlighting** (i.e., whether the display is illuminated or not, and the amount of time the display stays lit) may be an important consideration for telecoil users. Interference from backlighting, which can be particularly bothersome for telecoil users, is not tested when determining a cell phone's rating.
- **The key to finding** the right cell phone for an individual hearing aid and hearing loss is to try cell phones before purchasing them.
- **As of September 2005**, most stores owned and operated by cell phone service providers (i.e., carriers) will allow customers who use hearing aids to try out cell phones in stores before purchasing them.
- **Customers should ask** how long they have to cancel the service and return a phone without penalty, if the cell phone doesn't work with their particular hearing aid.
- **It is the customer's responsibility** to make sure any cell phone that doesn't work with their particular hearing aid is returned before any early termination fees go into effect.
- **CTIA, the wireless association**, provides additional information about cell phone ratings and links to many other disability and age related services available from its member companies. This information can be found at: www.accesswireless.org



PHOTO: Oticon

For information about hearing aids and digital wireless phones

FCC Hearing Aid Compatibility and Volume Control
<http://www.fcc.gov/cgb/dro/hearing.html>

Gallaudet University, RERC
<http://tap.gallaudet.edu/DigWireless.KS/DigWireless.htm>

Self Help for Hard of Hearing People Inc. [SHHH]
www.hearingloss.org/hat/TipsWirelessPhones.htm

The Hearing Aid Compatibility FCC Order
http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-168A1.pdf

How can I learn more about my company's responsibilities?



ATIS Incubator Solutions Program – The Alliance for Telecommunications Industry Solutions (ATIS) is a United States organization that is committed to rapidly developing and promoting technical and operations standards for the communications and related information technologies industry worldwide using an approval by consensus approach. Over 1,100 industry professionals from more than 350 communications companies actively participate in ATIS' industry committees and incubator solutions programs where standards and solutions are developed addressing a wide range of industry issues. The Industry, health care professionals and consumers with disabilities have been working together to develop solutions and meet the FCC requirements, through the ATIS Hearing Aid Compatibility - Incubator Solutions Program. This working group is an open and impartial consensus program that investigates and develops recommendations to standards for magnetic coupling and interference from wireless devices. Members of the Incubator Solutions Program include: Sony Ericsson Mobile, Research In Motion, Nokia, Motorola, Kyocera Wireless, Nextel, Audiovox, Panasonic, Siemens, Samsung Electronics, NEC America, Cingular Wireless, AT&T Wireless, Dobson Cellular Systems, Inc., Leap Wireless/Cricket Communications, Alltel, Keystone Wireless, Verizon Wireless, Sprint PCS, Carolina West Wireless, Western Wireless Corporation, Louisiana Unwired LLC, T-Mobile, Key Communications, American Cellular Systems, Inc., Nextel Partners Inc, Brookings Municipal Utilities d/b/a Swiftel Communications, and HIA. Other participants within the Incubator Solutions Program include: Self Help for Hard of Hearing People Inc. (SHHH), Gallaudet University, Siemens Hearing Aids, Etymotic, Starkey, ASHA, AAA, CTIA, ANSI ASC C63, FCA and FCC. The ATIS website, www.atis.org, has information about the ATIS Incubator Solutions Program #4 on HAC (AISP.4-HAC).

www.atis.org



The Wireless Association™

CTIA—The Wireless Association™ is the international organization that represents all sectors of wireless communications-cellular, personal communication services and enhanced specialized mobile radio. CTIA serves the interests of service providers, manufacturers, wireless data and Internet companies and other contributors to the wireless universe. www.ctia.org. The CTIA website, www.accesswireless.org, has information for deaf and hard of hearing consumers. This site provides consumers with relevant information to help them select a wireless phone and service that best meets their needs.

www.ctia.org

www.accesswireless.org

Compatibility of Digital Wireless Telecommunications and Hearing Aids

Rules, Requirements and Responsibilities

PHOTO: Oticon



Wireless telecommunications technology is increasingly important in people's everyday lives. These wireless devices are used for transacting business, staying in touch with family and friends, and for communicating during emergencies. While the digital wireless revolution has brought many benefits to consumers, including customers with disabilities, there continue to be technical challenges which limit the use of digital wireless telecommunications for some consumers who wear hearing aids.



A key challenge for our industry is reducing the interference between some hearing aids and some digital wireless phones. Wireless telecommunications

devices emit two types of electromagnetic (EM) fields: those necessary to connect phone calls that sometimes cause RF interference and those emitted by the circuitry and device backlighting that sometimes cause baseband interference. Some hearing aids, particularly those with low immunity levels, unintentionally pick up outside electromagnetic (EM) fields (e.g. florescent lighting, PC monitors , some digital wireless phones...etc.) creating a “buzz” heard by a hearing aid wearer that makes it difficult or impossible to hear the telephone conversation. A consumer’s experience with interference to his hearing aid is dependent on the unique interaction between the digital wireless telecommunications device he’s using and his hearing aids.

The Hearing Aid Compatibility Act

Effective November 17, 2003 the Federal Communications Commission (FCC) updated the Hearing Aid Compatibility Act of 1998 implementing new requirements for digital wireless phones (WT Docket No. 01-309; FCC 03-168) to enable hearing aid wearers to more effectively use these devices. The FCC adopted certain handset performance levels established by the American National Standards Institute (ANSI C63.19) that require companies to certify compliance with the ANSI C63.19 standard and indicate the appropriate device ratings for both reduced RF emissions and magnetic coupling¹. In addition, by September 2005 digital wireless handset packaging material will be made available to clearly display the handset’s performance level (M rating). Further explanations about the ANSI C63.19 M ratings will be included in the User’s manual or as an insert in the handset packaging materials.

¹Approximately 30% of the hearing aids sold in the United States are telecoil equipped. The telecoils provide magnetic coupling which creates a direct feed of sound from the phone to the hearing aid. The magnetic coupling cuts out background noise and increases the hearing aid user’s ability to better hear the phone conversation.

What does this law mean for companies?

Which companies have to comply?

- **Service Providers** offering commercial wireless communications within the United States
- **Manufacturers** of wireless telecommunications devices used in the delivery of the above-mentioned services within the United States.
- **Exemption from requirements**
Service providers and manufacturers that offer only two or fewer digital wireless phone models for sale in the United States. are exempt from these requirements

What are the technical requirements?

For Manufacturers with more than two digital wireless phone models for sale in the United States

Reduced RF emissions

- **By September 16, 2005** - Offer to service providers at least two handset models for each air interface offered that comply with a minimum of M3 rating as set forth in the ANSI C63.19 requirements
- **By February 18, 2008** - Ensure at least 50% of handset offerings for each air interface offered comply with a minimum of M3 rating as set forth in the ANSI C63.19 standards

Telecoil / Magnetic Coupling

- **By September 18, 2006** - Offer to service providers at least two handset models for each air interface offered that comply with a minimum of T3 rating as set forth in the ANSI C63.19 standards

For Manufacturers with only three digital wireless phone models for sale in the United States

- **By September 16, 2005** – Offer to service providers at least one compliant model for each air interface offered that comply with a minimum of M3 rating as set forth in the ANSI C63.19 standards

For Tier I Carriers

Reduced RF emissions

- **By September 16, 2005** - Include in handset offerings at least two handset models or 25% (whichever is greater) of the total number of unique digital wireless handset models offered by the carrier nationwide for each air interface, that comply with a minimum of M3 rating as set forth in the ANSI C63.19 standards, and make available in each retail store owned / operated by the carrier all of these handset models for consumers to test in the store
- **By February 18, 2008** – Ensure that at least 50% of handset models for each air interface comply with a minimum of M3 rating as set forth in the ANSI C63.19 standards calculated based on the total number of unique digital wireless phone models that the carrier offers nationwide

Telecoil / Magnetic Coupling

- **By September 18, 2006** - Include in handset offerings at least two handset models for each air interface that comply with a minimum of T3 rating as set forth in the ANSI C63.19 standards, and make available in each retail store owned / operated by the provider all of these handset models for consumers to test in the store

For Tier I Carriers that obtain handsets only from manufacturers that offer three digital wireless phone models in the United States

- **By September 16, 2005** – Offer at least one compliant model for each air interface offered that comply with a minimum of M3 rating as set forth in the ANSI C63.19 standards



What does this law mean for our customers?

Approximately one in ten people in the United States have a hearing loss, and this number is increasing especially as our population ages. Many of these individuals wear hearing aids and they want to use wireless phones for the same reasons that everyone else wants to use them. Educating company call center and retail representatives about hearing aids and digital wireless phones and encouraging customers to try the phones before they purchase them, will help to insure a successful customer experience. A company’s compliance with this law will translate into new customers, extending the benefits of digital wireless technology to millions of people with a hearing loss.